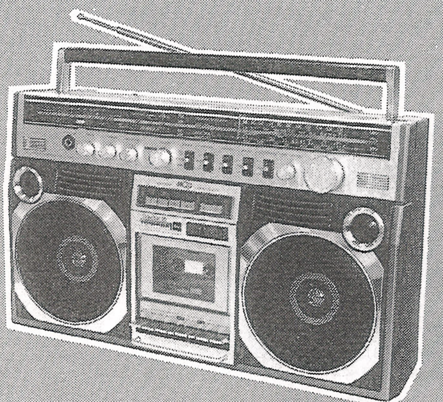
484

SERVICE DATA
FILE NO. 110-227

TOSHIBA
STEREO RADIO CASSETTE RECORDER
RT-8890S



SPECIFICATIONS

Cassette tape used:	C-30, C-60, C-90, C-120
Tape speed:	4.8 cm/sec.
Track system:	Four-track two-channel stereophonic
Recording system:	AC bias (55 kHz)
Erasing system:	Multipolar magnet erasing
Frequency response:	Normal 60 Hz to 10 kHz
Receiving frequency:	FM: 88 – 108 MHz MW: 525 – 1605 kHz SW1: 2.3 – 7.5 MHz SW2: 7.5 – 22 MHz
Intermediate frequency:	FM: 10.7 MHz MW, SW1, SW2: 455 kHz
Antenna:	FM, SW1, SW2: telescopic antenna MW: ferrite-core antenna
Speakers:	160 mm (dia.) dynamic x 2 50 mm (dia.) dynamic x 2 40 mm (dia.) dynamic x 2

Jacks:	[MIC] jack x 2, Impedance 200 – 2K ohm [AUX] jack x 2, Impedance 50K ohm [LINE OUT] jack x 2, Impedance 12K ohm [EXT SP] jack x 2, Impedance 3.2 – 8 ohm [PHONES] jack headphone
Power supply:	AC 110V-120V/220V-240V, 50/60 Hz DC 13.5V (SUM-1 "D" size x 9)
Power output:	3.8W x 2, 10% distortion
Power consumption:	18 W
Dimensions:	(W) 520 mm x (H) 307 mm x (D) 155 mm
Weight:	6.3 kg (without batteries)

Specifications are subject to change without notice.

VF

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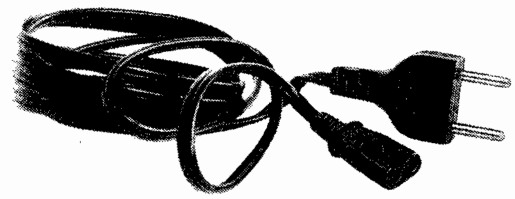
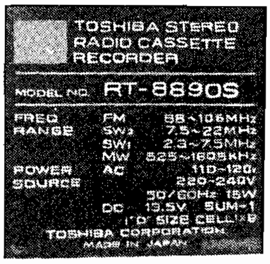


POWER SUPPLY CORD



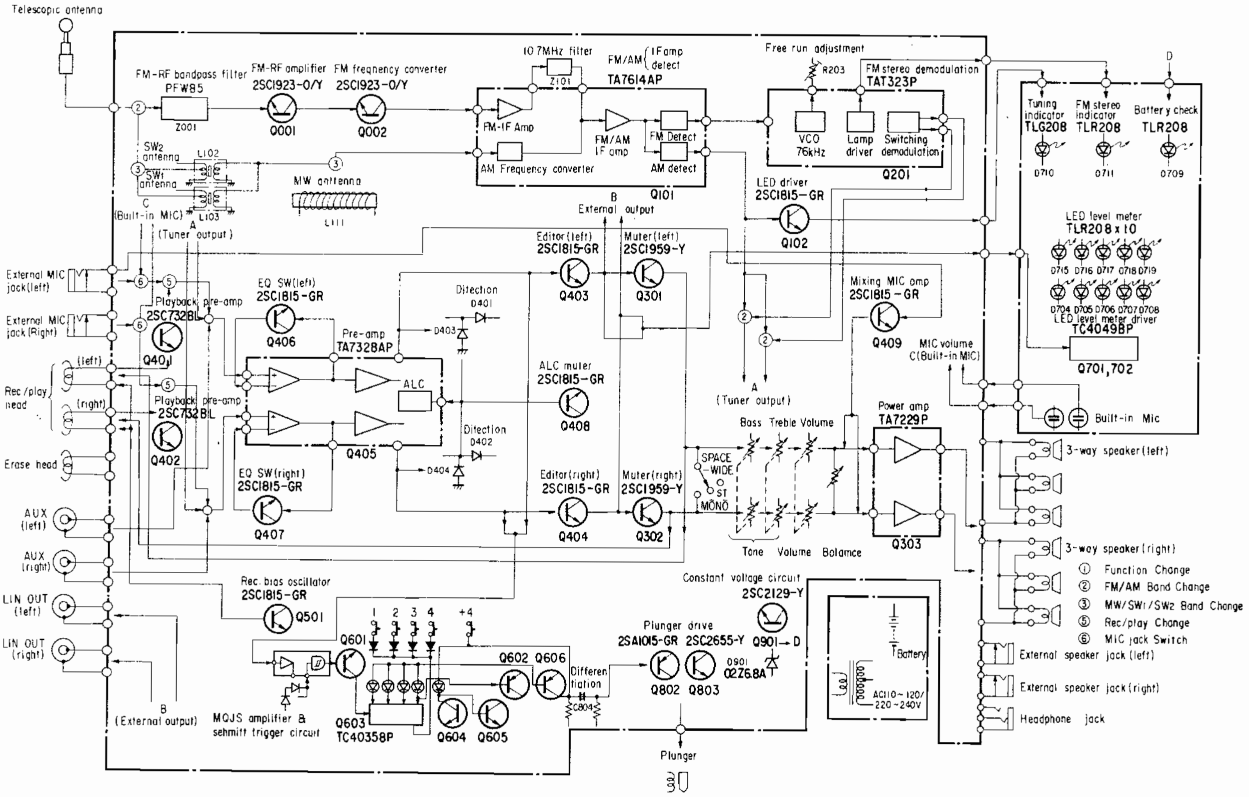
TOSHIBA STEREO
RADIO CASSETTE
RECORDER

MODEL NO. RT-8890S

FREQ RANGE FM 88~108MHz
SW2 7.5~22MHz
SW1 2.3~7.5MHz
MW 525~1605kHz
POWER SOURCE AC 110~120/
220~240V
50/60Hz 15W
DC 13.5V SUM-1
("D" SIZE CELL)×8
TOSHIBA CORPORATION
MADE IN JAPAN

NAMEPLATE

1. BLOCK DIAGRAM



Telescopic antenna
FM-RF bandpass filter
PFW85
Z001
FM-RF amplifier
2SC1923-O/Y
Q001
FM frequency converter
2SC1923-O/Y
Q002
10.7MHz filter
Z101
FM/AM IF amp detect
TA7614AP
FM-IF Amp
FM/AM IF amp
FM Detect
AM Frequency converter
AM detect
Q101
B
External output
SW2 antenna
SW1 antenna
L102
L103
MW antenna
L111
C
(Built-in MIC)
A
(Tuner output)
Free run adjustment
R203
FM stereo demodulation
TA7323P
VCO 76kHz
Lamp driver
Switching demodulation
Q201
LED driver
2SC1815-GR
Q102
Tuning indicator
TLG208
FM stereo indicator
TLR208
Battery check
TLR208
D710
D711
D709
D
LED level meter
TLR208 x 10
D715 D716 D717 D718 D719
D704 D705 D706 D707 D708
LED level meter driver
TC4049BP
Q701,702
External MIC jack (left)
External MIC jack (Right)
Playback pre-amp
2SC732BL
Q401
Q402
EQ SW (left)
2SC1815-GR
Q406
Pre-amp
TA7328AP
ALC
Q405
Direction
D401
D403
D402
D404
EQ SW (right)
2SC1815-GR
Q407
Editor (left)
2SC1815-GR
Q403
Muter (left)
2SC1959-Y
Q301
ALC muter
2SC1815-GR
Q408
Editor (right)
2SC1815-GR
Q404
Muter (right)
2SC1959-Y
Q302
Mixing MIC amp
2SC1815-GR
Q409
MIC volume
C (Built-in MIC)
Built-in Mic
A
(Tuner output)
Bass Treble Volume
SPACE
-WIDE
ST
MONO
Tone Volume Balamce
Power amp
TA7229P
Q303
3-way speaker (left)
3-way speaker (right)
① Function Change
② FM/AM Band Change
③ MW/SW1/SW2 Band Change
⑤ Rec/play Change
⑥ MIC jack Switch
External speaker jack (left)
External speaker jack (right)
Headphone jack
Rec/play head
(left)
(right)
Erase head
AUX (left)
AUX (right)
LIN OUT (left)
LIN OUT (right)
B
(External output)
Rec. bias oscillator
2SC1815-GR
Q501
1 2 3 4 +4
Q601
MQJS amplifier & sehmitt trigger circuit
Q603
TC40358P
Q602 Q606
Q604 Q605
Differentiation
C804
Plunger drive
2SA1015-GR 2SC2655-Y
Q802 Q803
D901
02Z6.8A
Constant voltage circuit
2SC2129-Y
Q901 → D
Battery
AC110~120/220~240V
Plunger

Figure 1.

2. OPERATING CONTROLS

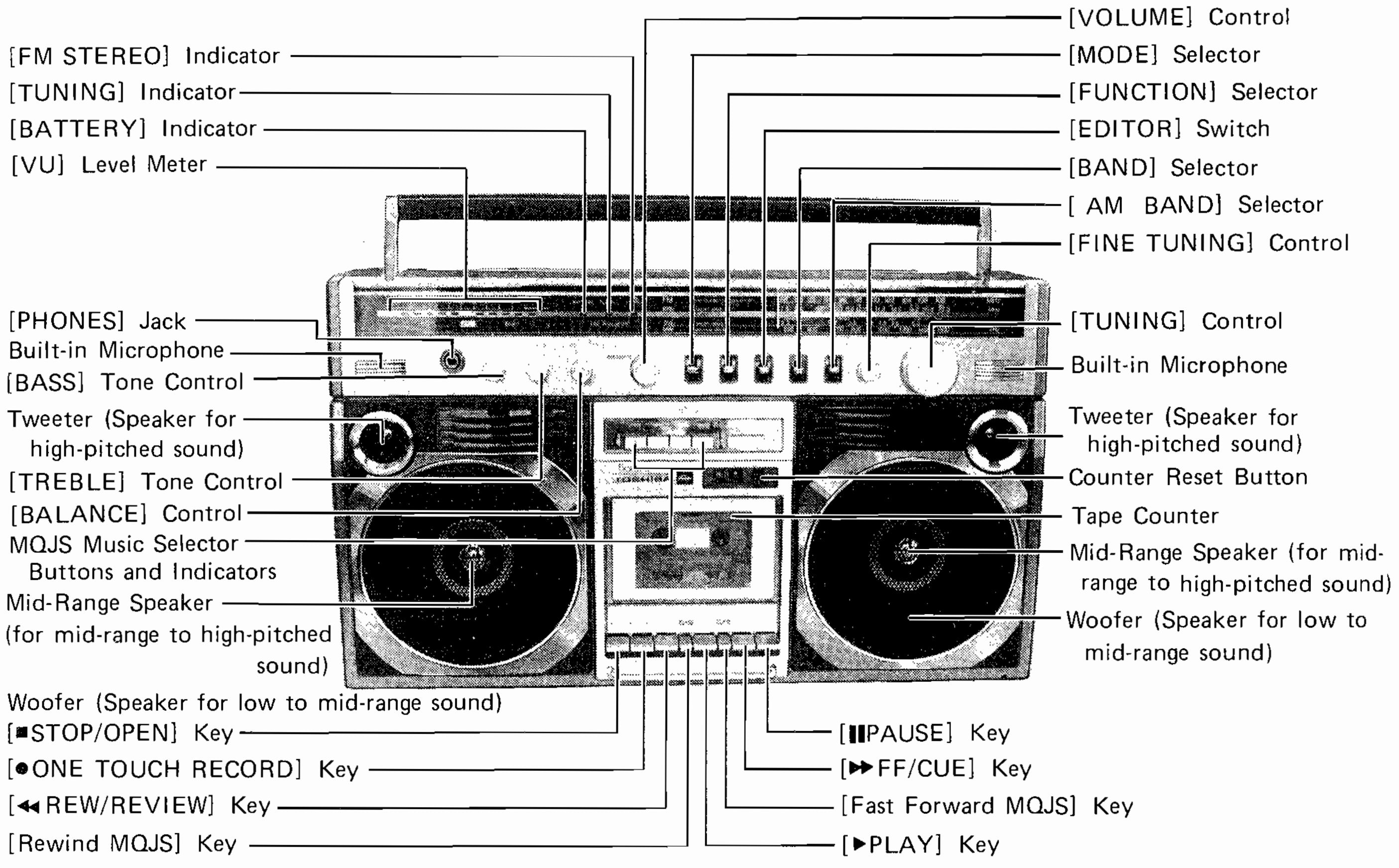

[FM STEREO] Indicator
[TUNING] Indicator
[BATTERY] Indicator
[VU] Level Meter
[PHONES] Jack
Built-in Microphone
[BASS] Tone Control
Tweeter (Speaker for high-pitched sound)
[TREBLE] Tone Control
[BALANCE] Control
MQJS Music Selector Buttons and Indicators
Mid-Range Speaker (for mid-range to high-pitched sound)
Woofer (Speaker for low to mid-range sound)
[■STOP/OPEN] Key
[●ONE TOUCH RECORD] Key
[◂◂REW/REVIEW] Key
[Rewind MQJS] Key
[VOLUME] Control
[MODE] Selector
[FUNCTION] Selector
[EDITOR] Switch
[BAND] Selector
[AM BAND] Selector
[FINE TUNING] Control
[TUNING] Control
Built-in Microphone
Tweeter (Speaker for high-pitched sound)
Counter Reset Button
Tape Counter
Mid-Range Speaker (for mid-range to high-pitched sound)
Woofer (Speaker for low to mid-range sound)
[❚❚PAUSE] Key
[▸▸FF/CUE] Key
[Fast Forward MQJS] Key
[▸PLAY] Key

Figure 2.

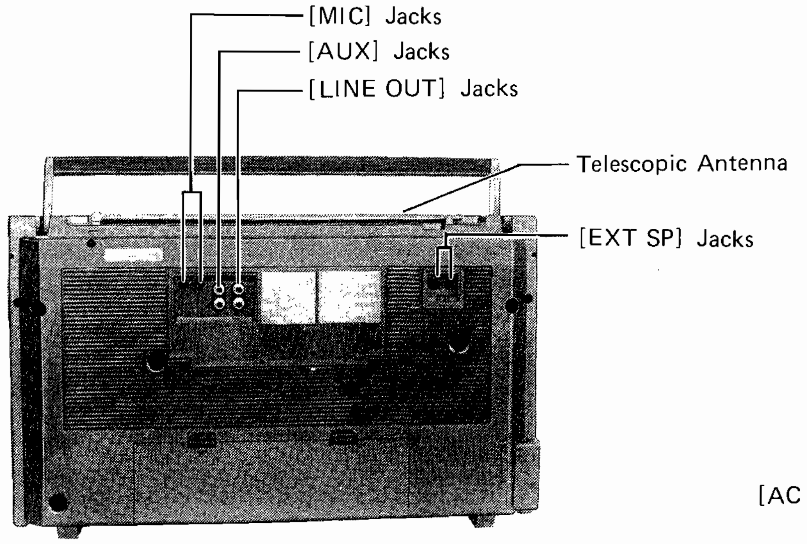

[MIC] Jacks
[AUX] Jacks
[LINE OUT] Jacks
Telescopic Antenna
[EXT SP] Jacks

Figure 3.

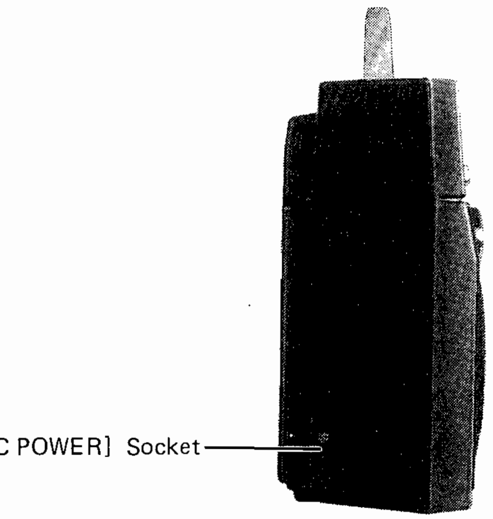

[AC POWER] Socket

Figure 4.

3. DISASSEMBLY INSTRUCTIONS

FRONT PANEL REMOVAL

1. Remove 7 Screws Ⓐ. See figure 5.
2. Remove 11 Knobs (Bass, Treble, Balance, Volume, Mode, Editor, Function, Band, AM Band, Tune and Fine tune).
3. Separate the front panel from the cabinet back. See figure 5.

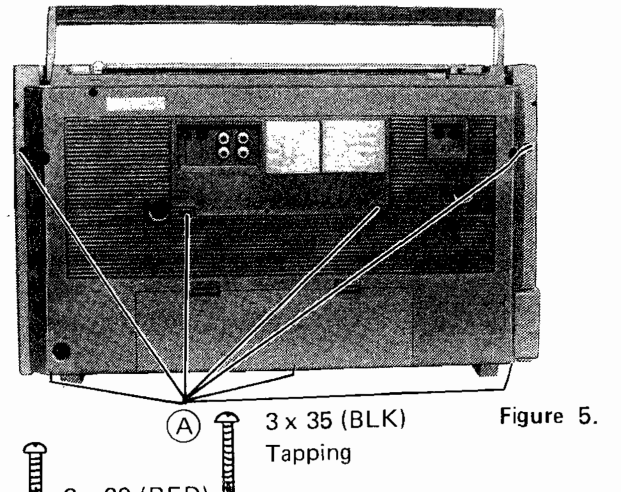

Ⓐ
3 x 35 (BLK)
Tapping

Figure 5.

MECHANICAL ASS'Y REMOVAL

1. Remove 4 screws Ⓑ, and remove the lead wires of head. See figure 6.
2. Separate the mechanical ass'y from the cabinet back.

MQJS P.C. BOARD REMOVAL

1. Remove 2 screws Ⓒ. See figure 6.
2. Separate the MQJS P.C. Board from the cabinet back.

MAIN P.C. BOARD REMOVAL

1. Remove 2 screws Ⓓ. See figure 6.
2. Separate the main P.C. Board from the cabinet back.

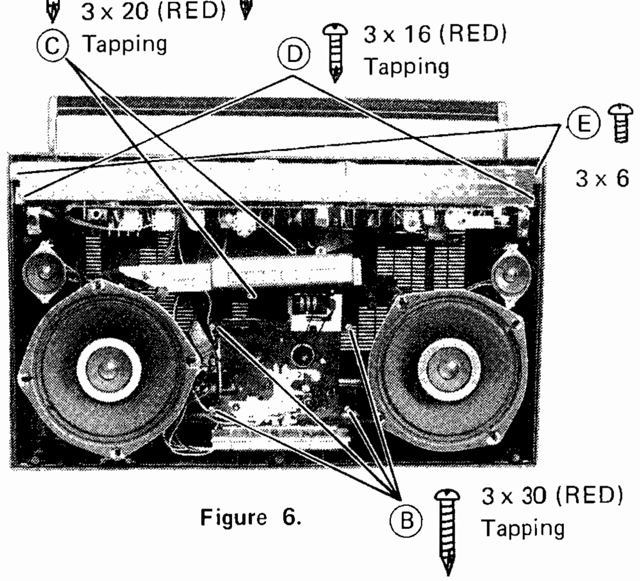

3 x 20 (RED)
Ⓒ Tapping
Ⓓ
3 x 16 (RED)
Tapping
Ⓔ
3 x 6
Ⓑ
3 x 30 (RED)
Tapping

Figure 6.

LED P.C. BOARD REMOVAL

1. Remove 2 screws Ⓔ and remove the dial plate. See figure 6.
2. Restore 3 hooks Ⓕ and separate the LED P.C. Board from the frame. See figure 7.

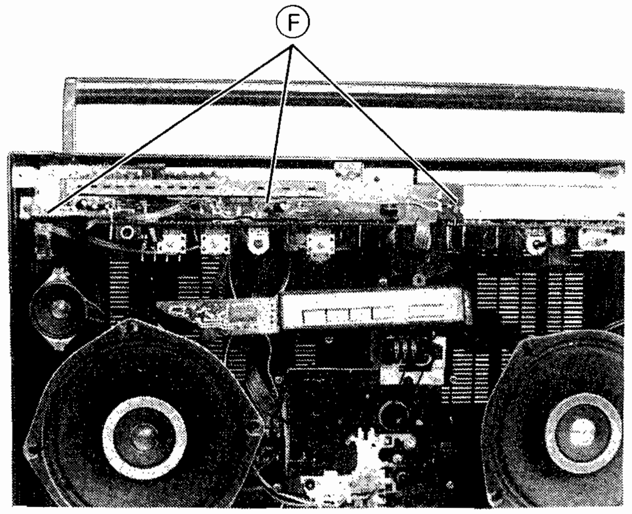


Figure 7.

4. ALIGNMENT INSTRUCTIONS

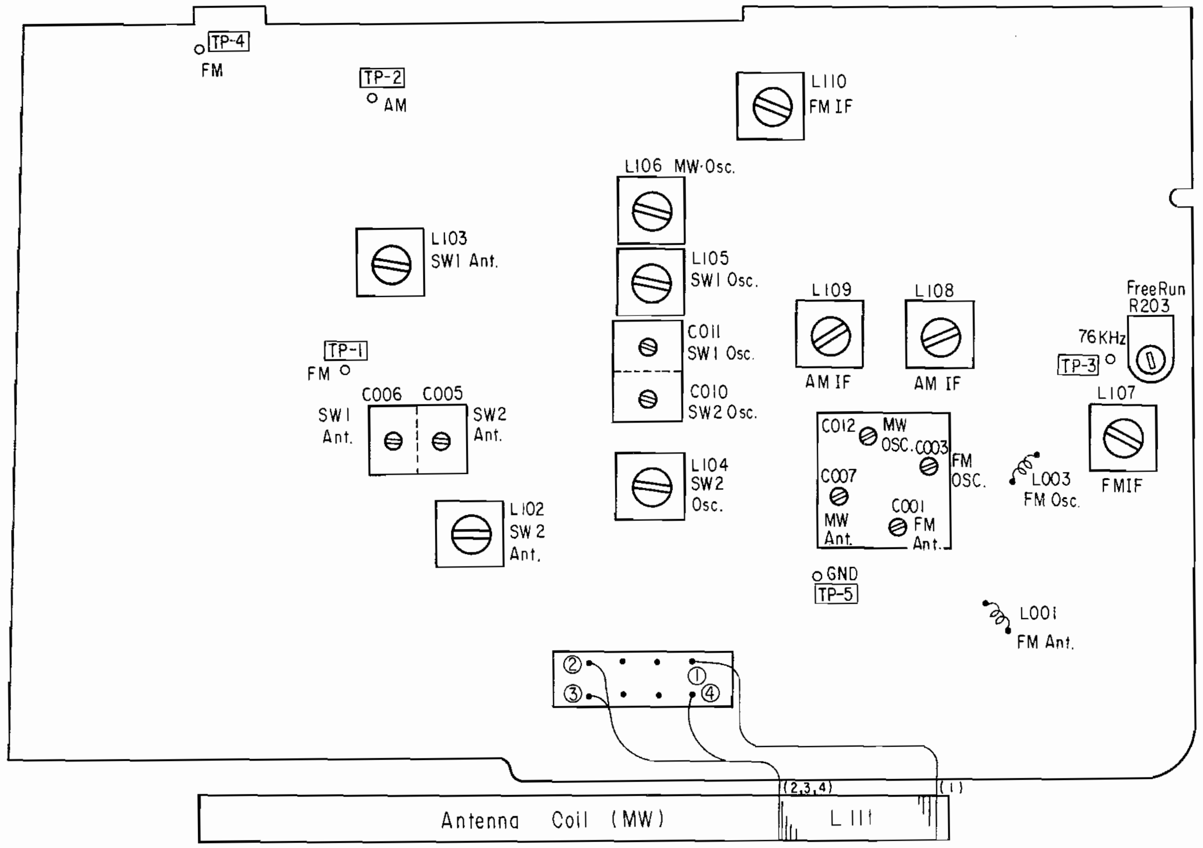

TP-4
FM
TP-2
AM
L110
FM IF
L106 MW·Osc.
L103
SW1 Ant.
L105
SW1 Osc.
L109
L108
FreeRun
R203
C011
SW1 Osc.
76KHz
TP-3
TP-1
FM
AM IF
AM IF
L107
C006
C005
C010
SW2 Osc.
SW1
Ant.
SW2
Ant.
C012
MW
OSC.
C003
FM
OSC.
L104
SW2
Osc.
L003
FM Osc.
FMIF
C007
MW
Ant.
C001
FM
Ant.
L102
SW2
Ant.
GND
TP-5
L001
FM Ant.
②
③
①
④
(2,3,4)
(1)
Antenna Coil (MW)
L111

Figure 8.

TEST EQUIPMENT

1. Signal generator with a frequency range of at least from 455 kHz to 23 MHz AM.
2. Oscilloscope with a wide range amplifier of approximately 100 kHz.
3. Test loop – a coil of any size wire, one turn or more. (MW)
4. A 30-ohm dummy antenna. (SW1, SW2)
5. VTVM

AM ALIGNMENT

1. Turn on the AM signal generator and the VTVM allowing a fifteen-minute warm-up period.
2. Using the test loop across the output of the signal generator, inductively connect the signal generator to the radio.
3. Connect the VTVM across the voice coil or a 3.2 ohm dummy load.
4. Set signal generator frequency as listed in ALIGNMENT CHART and maintain a sufficient output level to provide an indication on VTVM.
5. Set volume control at mid-position.
6. Proceed as outlined in the IF-MW and SW ALIGNMENT CHART.

MW ALIGNMENT CHART

Band	Step	Signal Generator Frequency	Radio Dial Setting	Adjustment	Remarks
IF	1	455 kHz	Tuning Gang Fully Counter-clockwise (Lowest Frequency)	L108 L109	Adjust for maximum indication.
MW	2	510 kHz	Tuning Gang Fully Counter-clockwise (Lowest Frequency)	OSC. Coil L106 (MW)	Adjust for maximum indication.
	3	1650 kHz	Tuning Gang Fully clockwise (Highest Frequency)	OSC. Trim C012	Adjust for maximum indication.
	4	Repeat steps 2 and 3 as required.			
	5	600 kHz	Tune to Signal.	Ant. Coil L111 (MW)	Adjust for maximum indication.
	6	1400 kHz	Tune to Signal.	Ant. Trim. C007	Adjust for maximum indication.
	7	Repeat steps 5 and 6 as required.			

SW ALIGNMENT CHART

Band	Step	Signal Generator Frequency	Radio Dial Setting	Adjustment	Remarks
SW1	1	2.25 MHz	Tuning Gang Fully Counter-clockwise (Lowest Frequency)	OSC. Coil L105 (SW1)	Adjust for maximum indication.
	2	7.7 MHz	Tuning Gang Fully Clockwise (Highest Frequency)	OSC. Trim. C011	Adjust for maximum indication.
	3	Repeat steps 1 and 2 as required.			
	4	3 MHz	Tune to Signal.	Ant. Coil L103 (SW1)	Adjust for maximum indication.
	5	7 MHz	Tune to Signal.	Ant. Trim. C006	Adjust for maximum indication.
	6	Repeat steps 4 and 5 as required.			
SW2	1	7.35 MHz	Tuning Gang Fully Counter-clockwise (Lowest Frequency)	OSC. Coil L104 (SW2)	Adjust for maximum indication.
	2	22.5 MHz	Tuning Gang Fully Clockwise (Highest Frequency)	OSC. Trim. C010	Adjust for maximum indication.
	3	Repeat steps 1 and 2 as required.			
	4	9 MHz	Tune to Signal.	Ant. Coil L102 (SW2)	Adjust for maximum indication.
	5	20 MHz	Tune to Signal.	Ant. Trim. C005	Adjust for maximum indication.
	6	Repeat steps 4 and 5 as required.			

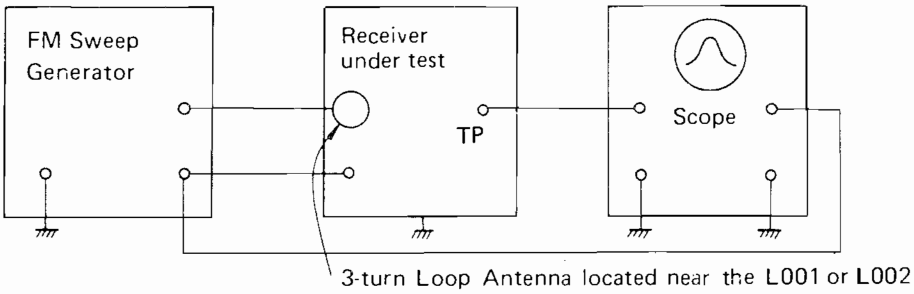
FM-IF ALIGNMENT

1. Set the select switch to FM position.
2. Turn on both sweep generator and oscilloscope, and allow a fifteen-minute warm-up period.
3. Connect the RF SWEEP SIGNAL OUTPUT from the signal generator through the loop antenna to the receiver.
4. Connect the oscilloscope vertical input directly to the test point TP-4 FM and connect the shielded lead to the test point TP-5 GND.
5. Connect the SWEEP VOLTAGE OUTPUT of the sweep generator to the oscilloscope.
6. Proceed as outlined in the FM-IF ALIGNMENT CHART.

FM-IF ALIGNMENT CHART

Step	Signal coupling	Equip.	Tuning	Connection	Adjust. point	Pattern
1	Connect sweep generator output to a three-turn loop antenna of 10cm diameter.	Sweep generator of 10.7 MHz center freq. with 10.7 MHz marker.	Tuning Knob fully counter-clockwise (Lowest Frequency.)	Set scope for connecting output signal from TUN OUT to vertical axis of scope "V" and sweep generator output to horizontal axis "H".	L107 L110	Turn the coil L110 fully counterclockwise to obtain a single peak. Fig. 10. Adjust coil L107 in order until the best single peak is obtained. Finally turn the coil L110 to obtain S curve. Fig. 11.

IF Sweep Test



Generator Coupling Hook-up

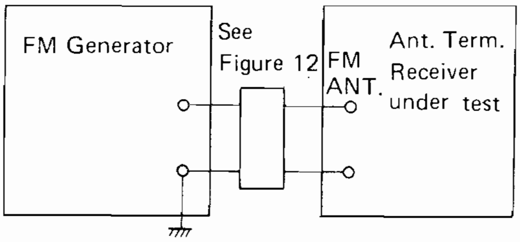


Figure 9.

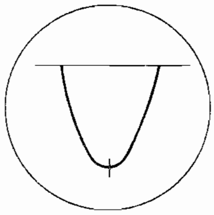


Figure 10.

S Curve

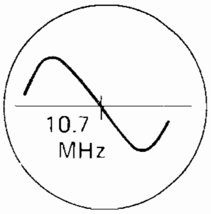


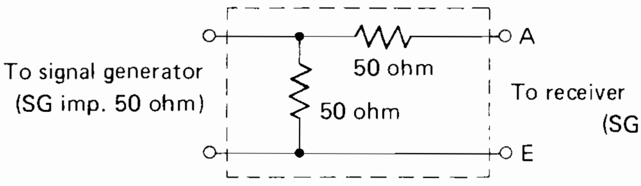
Figure 11.

FM-RF ALIGNMENT

1. Turn on the signal generator and the VTVM, and allow a fifteen-minute warm-up period.
2. Connect the signal generator output through a 75 ohm dummy antenna across FM ANT.
3. Connect the VTVM across the voice coil or a 3.2 ohm dummy load.
4. Set the volume control to mid-position.
5. Adjust the signal generator frequency as indicated in FM-RF ALIGNMENT CHART, and maintain a sufficient signal output level to provide a measurable indication.
6. Proceed as outlined in the FM-RF ALIGNMENT CHART.

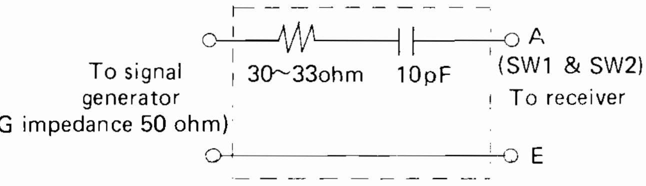
FM-RF ALIGNMENT CHART

Step	Signal Generator	Radio Dial Setting	Adjustment	Remarks
1	87.3 MHz	Tuning Knob fully Counterclockwise (Lowest Frequency)	OSC. Coil L003	Adjust for maximum output indication
2	109MHz	Tuning Knob fully Clockwise (Highest Frequency)	OSC. Trim. C003	Adjust for maximum output indication
3	Repeat steps 1 and 2 as required.			
4	90MHz	Tune to signal	Ant. Coil L001	Adjust for maximum output indication
5	106MHz		Ant. Trim. C001	
6	Repeat steps 4 and 5 as required.			


To signal generator
(SG imp. 50 ohm)
50 ohm
50 ohm
A
E
To receiver

75 ohm dummy antenna

Figure 12.


To signal generator
(SG impedance 50 ohm)
30~33ohm
10pF
A
(SW1 & SW2)
To receiver
E

30 ohm dummy antenna

Figure 13.

FREE RUN FREQUENCY ALIGNMENT

Adjust R203 under no signal condition so as to obtain 76 kHz ± 150 Hz.

RECORD/PLAYBACK HEAD ADJUSTMENT

A 6.3 kHz standard tape must be used for this adjustment. Connect a VTVM or an oscilloscope to the EXT Speaker jack and adjust the azimuth by using a phillips screwdriver to maintain the maximum output voltage.

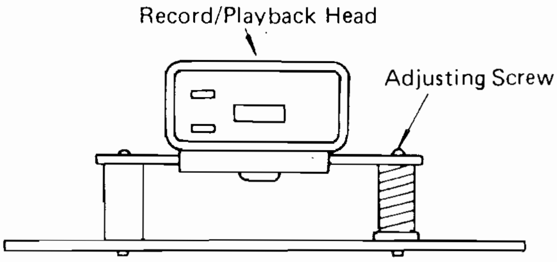
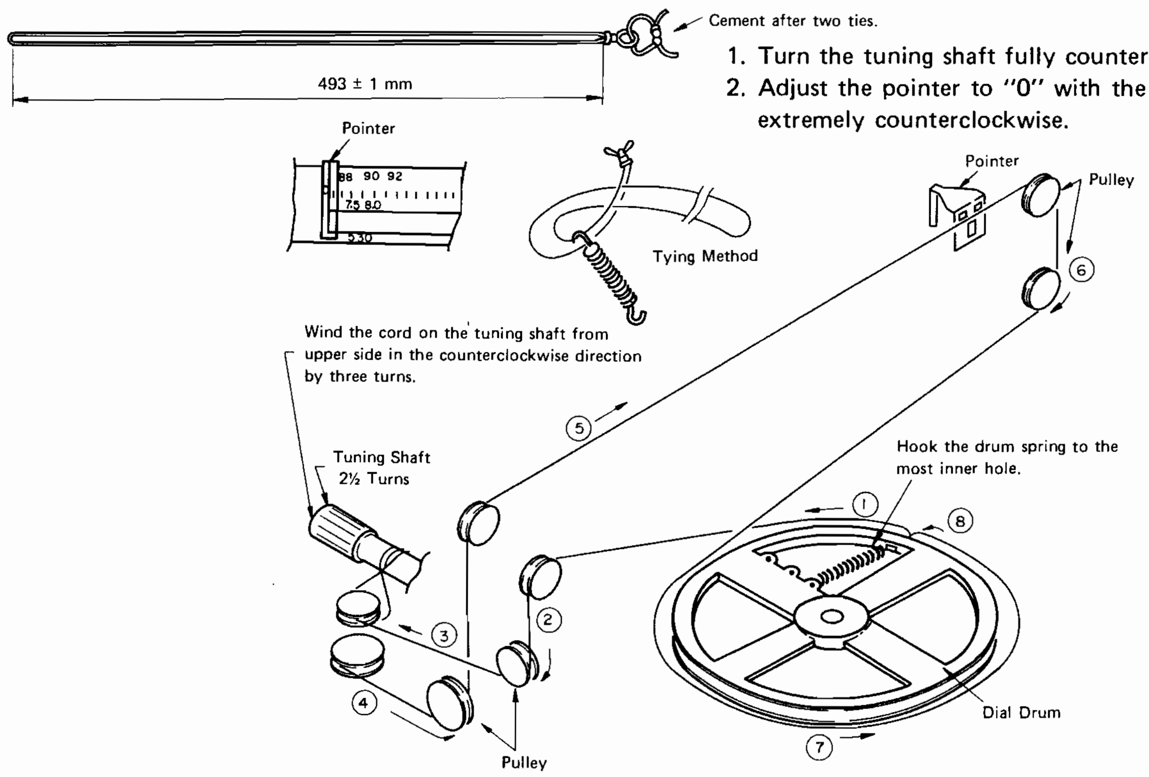

Record/Playback Head
Adjusting Screw

Figure 14. Record/Playback Head Adjustment

5. DIAL CORD RESTRINGING

1. Turn the tuning shaft fully counterclockwise.
2. Adjust the pointer to "0" with the tuning shaft turning extremely counterclockwise.



Cement after two ties.

Wind the cord on the tuning shaft from upper side in the counterclockwise direction by three turns.

Hook the drum spring to the most inner hole.

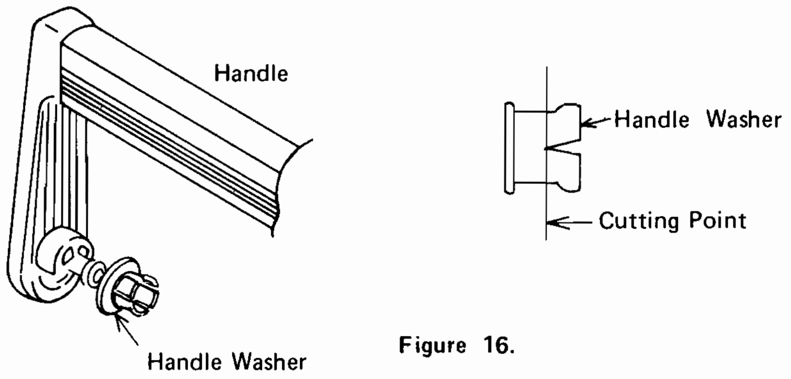
493 ± 1 mm
Pointer
88 90 92
75 80
530
Tying Method
Pointer
Pulley
⑥
Tuning Shaft
2½ Turns
⑤
①
⑧
③
②
④
Pulley
Dial Drum
⑦

Figure 15.

6. HANDLE REMOVAL

HANDLE REMOVAL

When replacing the handle, remove it by cutting the handle washer shown in figure below with nipper etc.

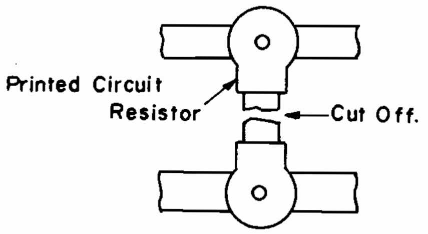


Handle
Handle Washer
Handle Washer
Cutting Point

Figure 16.

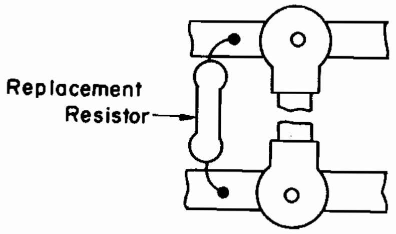
7. METHOD OF P.R.C. REPAIRING

Cut defective printed-resistor-circuit off by knife. See Figure17. Solder the replacement resistor (See replacement resistor parts list) on the opposite side of printed-circuit-board. See Figure 18.



Printed Circuit Resistor
Cut Off.

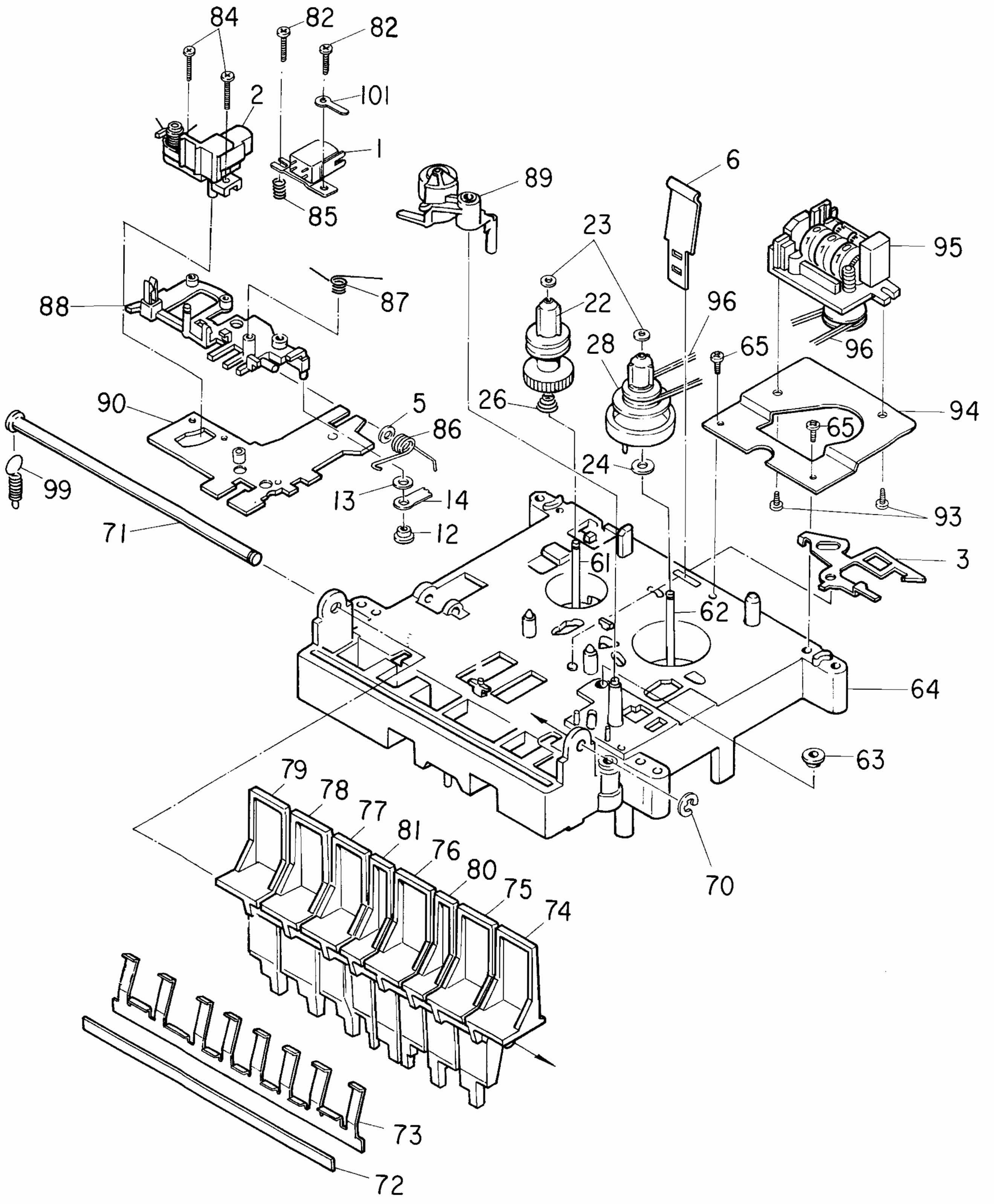
Figure 17.



Replacement Resistor

Figure 18.

8-1. MECHANISM EXPLODED VIEW (UPPER)

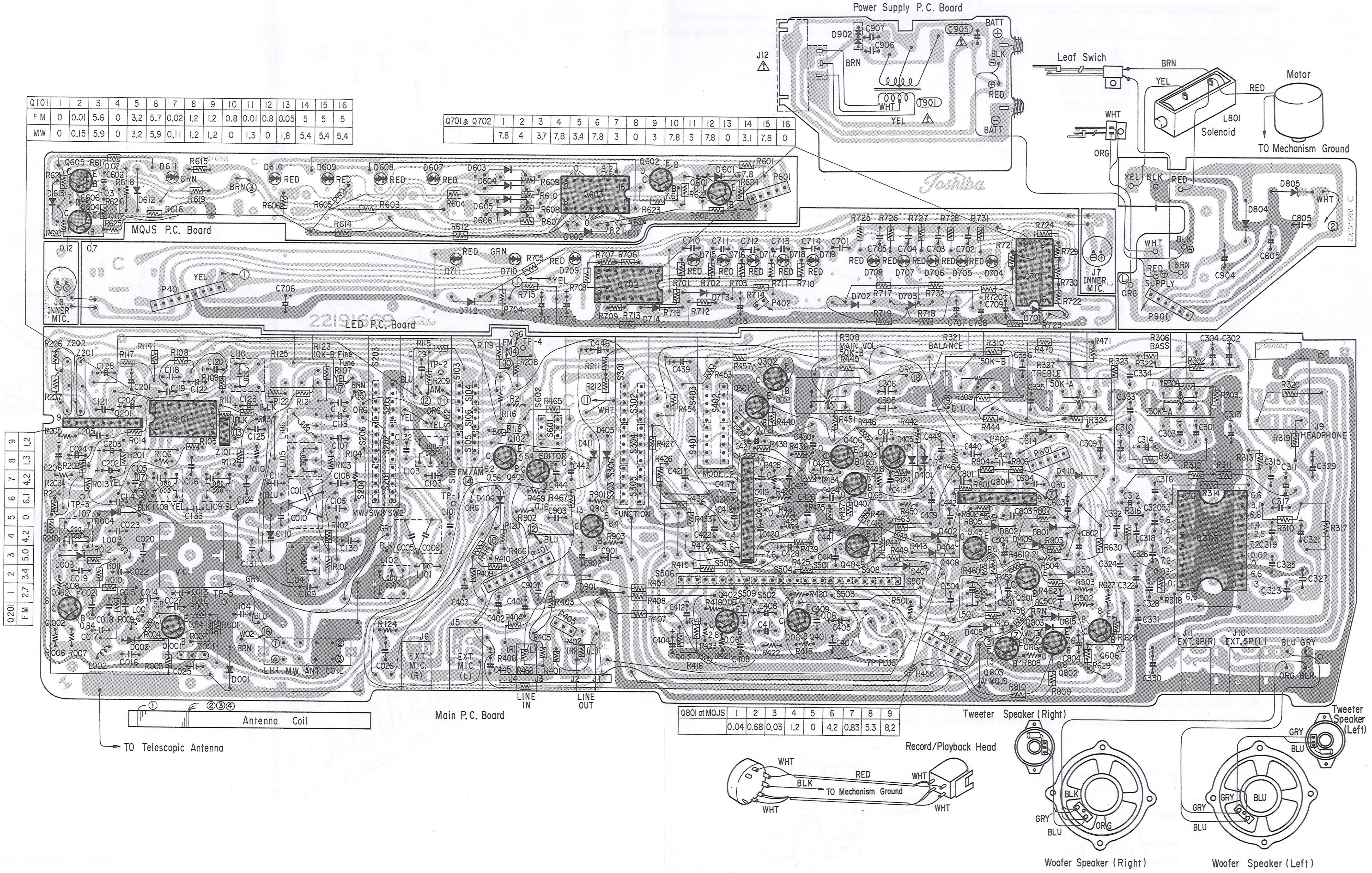


84
82
82
2
101
1
85
89
6
23
95
88
87
22
96
28
65
96
90
5
86
26
94
65
99
13
14
24
93
71
12
61
3
62
64
63
79
78
77
81
76
80
75
74
70
73
72

Figure 19.

NOTE: Excluded parts in the Parts List are not available as replacement parts.

9. ELECTRICAL PARTS LOCATIONS


Power Supply P.C. Board
J12
D902
C907
C906
C905
BATT
BRN
BLK
RED
WHT
YEL
T901
Leaf Swich
Motor
L801
Solenoid
TO Mechanism Ground
ORG
MQJS P.C. Board
LED P.C. Board
Toshiba
J8 INNER MIC.
J7 INNER MIC.
SUPPLY
P901
Main P.C. Board
MAIN VOL 50K-B
BALANCE
TREBLE 50K-A
BASS 50K-A
J9 HEADPHONE
FUNCTION
EDITOR
FM/AM
MW/SW1/SW2
10K-B Fine Tune
EXT MIC. (R)
EXT MIC. (L)
LINE IN
LINE OUT
J11 EXT.SP.(R)
J10 EXT.SP.(L)
7P PLUG
L111 MW ANT COIL
Antenna Coil
TO Telescopic Antenna
Tweeter Speaker (Right)
Tweeter Speaker (Left)
Record/Playback Head
TO Mechanism Ground
Woofer Speaker (Right)
Woofer Speaker (Left)

Q101	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
FM	0	0.01	5.6	0	3.2	5.7	0.02	1.2	1.2	0.8	0.01	0.8	0.05	5	5	5
MW	0	0.15	5.9	0	3.2	5.9	0.11	1.2	1.2	0	1.3	0	1.8	5.4	5.4	5.4

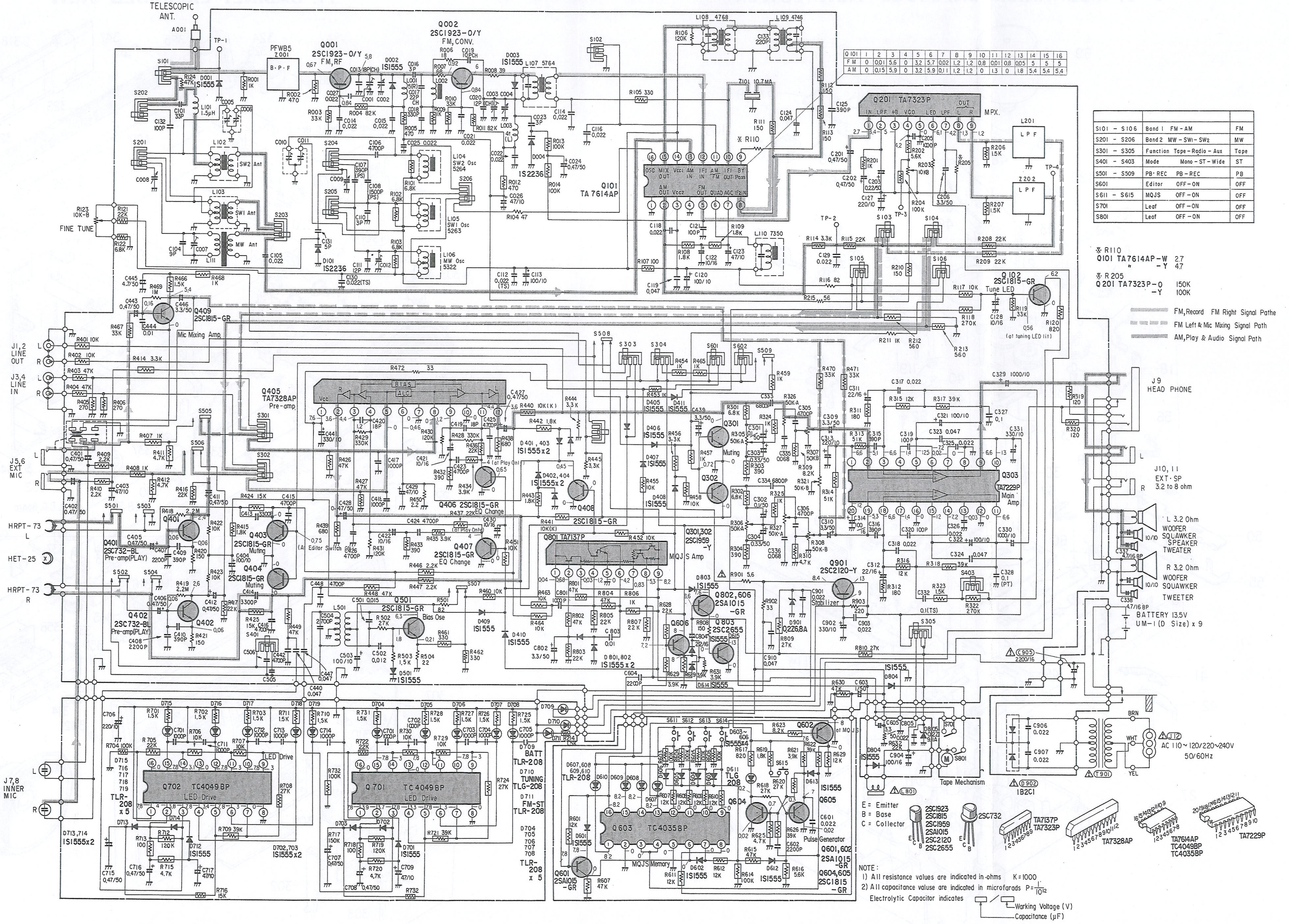
Q701 & Q702	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	7.8	4	3.7	7.8	3.4	7.8	3	0	3	7.8	3	7.8	0	3.1	7.8	0

Q201	1	2	3	4	5	6	7	8	9
FM	2.7	3.4	5.0	4.2	0	6.1	4.2	1.3	1.2

Q801 at MQJS	1	2	3	4	5	6	7	8	9
	0.04	0.68	0.03	1.2	0	4.2	0.83	5.3	8.2

Figure 20.

10. SCHEMATIC DIAGRAM


TELESCOPIC ANT.
Q001 2SC1923-O/Y FM,RF
Q002 2SC1923-O/Y FM, CONV.
Q101 TA7614AP
Q201 TA7323P MPX.
Q102 2SC1815-GR Tune LED
Q405 TA7328AP Pre-amp
Q409 2SC1815-GR Mic Mixing Amp.
Q401 2SC732-BL Pre-amp(PLAY)
Q402 2SC732-BL Pre-amp(PLAY)
Q403 2SC1815-GR Muting
Q404 2SC1815-GR Muting
Q406 2SC1815-GR EQ Change
Q407 2SC1815-GR EQ Change
Q408 2SC1815-GR
Q501 2SC1815-GR Bias Osc
Q801 TA7137P MQJS Amp
Q301,302 2SC1959 -Y Muting
Q303 TA7229P Main Amp
Q901 2SC2120-Y Stabilizer
Q802,606 2SA1015 -GR
Q803 2SC2655
Q702 TC4049BP LED Drive
Q701 TC4049BP LED Drive
Q603 TC4035BP MQJS Memory
Q601,602 2SA1015 -GR Pulse Generator
Q604,605 2SC1815 -GR
J1,2 LINE OUT
J3,4 LINE IN
J5,6 EXT MIC
J7,8 INNER MIC
J9 HEAD PHONE
J10, 11 EXT · SP 3.2 to 8 ohm
L 3.2 Ohm WOOFER SQUAWKER TWEATER
R 3.2 Ohm WOOFER SQUAWKER TWEATER
SPEAKER
BATTERY 13.5V UM-1 (D Size) x 9
AC 110~120/220~240V 50/60Hz
Tape Mechanism
HRPT-73 L
HET-25
HRPT-73 R
FINE TUNE
TLR-208 x 5
BATT TLR-208
TUNING TLG-208
FM-ST TLR-208
E = Emitter
B = Base
C = Collector
2SC1923
2SC1815
2SC1959
2SA1015
2SC2120
2SC2655
2SC732
TA7137P
TA7323P
TA7328AP
TA7614AP
TC4049BP
TC4035BP
TA7229P

Q101	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
FM	0	0.01	5.6	0	3.2	5.7	0.02	1.2	1.2	0.8	0.01	0.8	0.05	5	5	5
AM	0	0.15	5.9	0	3.2	5.9	0.11	1.2	1.2	0	1.3	0	1.8	5.4	5.4	5.4

S101 – S106	Band 1 FM – AM	FM
S201 – S206	Band 2 MW – SW1 – SW2	MW
S301 – S305	Function Tape – Radio – Aux	Tape
S401 – S403	Mode Mono – ST – Wide	ST
S501 – S509	PB · REC PB – REC	PB
S601	Editor OFF – ON	OFF
S611 – S615	MQJS OFF – ON	OFF
S701	Leaf OFF – ON	OFF
S801	Leaf OFF – ON	OFF

※ R110
Q101 TA7614AP – W 2.7
" – Y 4.7

※ R 205
Q201 TA7323P – O 150K
– Y 100K

▨ FM, Record FM Right Signal Pathe
▨ FM Left & Mic Mixing Signal Path
▨ AM, Play & Audio Signal Path

NOTE :
1) All resistance values are indicated in ohms K = 1000
2) All capacitance valuse are indicated in microfarads $P=\frac{1}{10^{12}}$
Electrolytic Capacitor indicates ☐ / ☐ Warking Voltage (V) Capacitance (μF)

CAUTION : The ⚠ mark, the symbol No. circled with rectangle in the schematic diagram and the shaded area in the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list.

Figure 21.

8–2. MECHANISM EXPLODED VIEW (LOWER)

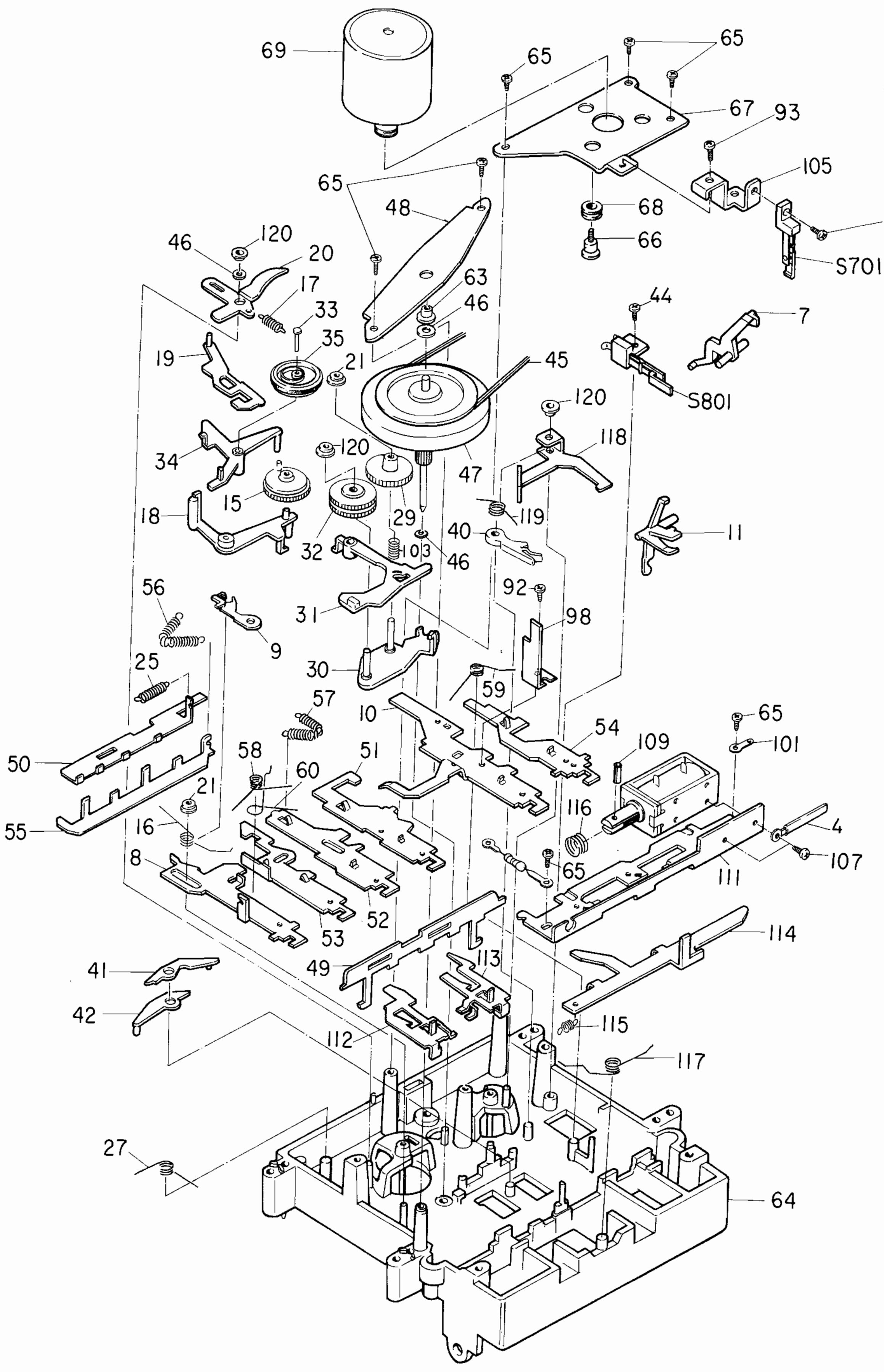

69
65
65
67
93
65
105
48
68
93
66
S701
46
120
20
17
63
46
33
44
7
35
21
45
19
S801
120
118
34
120
47
15
29
119
18
40
11
32
103
46
56
92
98
31
9
25
30
57
59
10
54
65
109
101
50
58
60
51
21
116
4
55
16
8
107
65
111
52
53
114
41
49
113
42
112
115
117
27
64

Figure 22.

NOTE: Excluded parts in the Parts List are not available as replacement parts.

11. CABINET EXPLODED VIEW

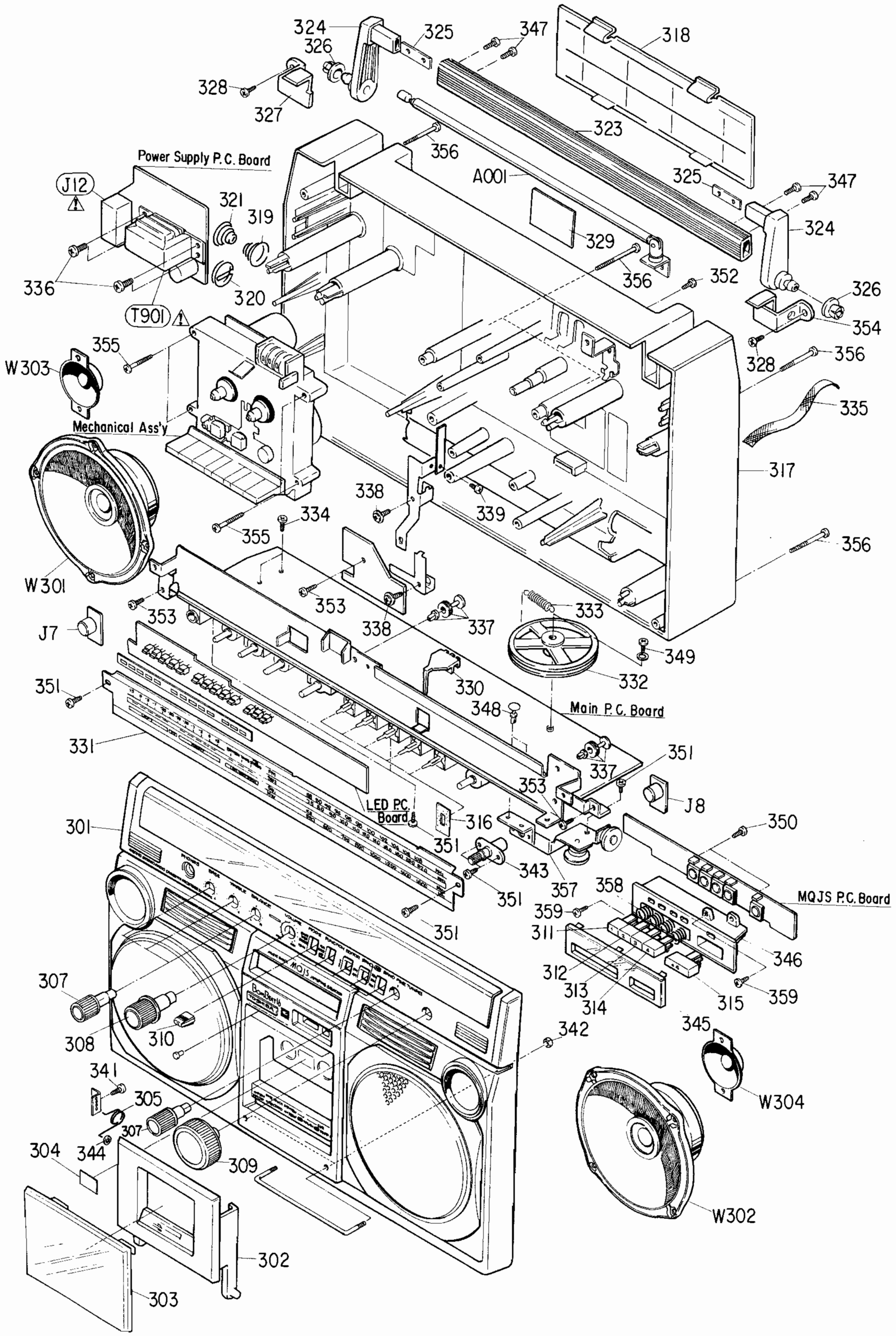

324
325
347
318
326
328
327
323
Power Supply P.C. Board
356
J12
325
347
A001
321
319
324
329
336
356
352
320
326
T901
354
355
328
356
W303
335
Mechanical Ass'y
317
338
334
339
355
356
W301
353
353
333
338
337
J7
349
330
351
332
348
Main P.C. Board
331
351
337
353
J8
LED P.C. Board
316
301
350
351
343
357
358
351
MQJS P.C. Board
359
311
351
346
312
313
314
315
359
307
345
342
308
310
341
W304
305
307
304
344
309
W302
302
303

Figure 23.

NOTE: Excluded parts in the Parts List are not available as replacement parts.

12. PARTS LIST

CAUTION: The ⚠ mark, the symbol No. circled with rectangle in the schematic diagram and the shaded area in the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list.

Symbol No.	Part No.	Description
MECHANISM		
1	22217351	Head, Record/Playback, HRPT-73
2	25719545	Head Ass'y, Erase (HET-25)
5	25764550	Washer, 3.6ϕ
7	25782253	Lever, Cassette Up
8	25741599	Operation Plate, Pause
9	25782173	Lock Lever, Pause
10	25741546	Operation Plate, Record
11	25782248	Lock Lever, Record
13	25764476	Washer, 3ϕ
16	25773486	Spring, ASO Lever
17	25776043	Spring
18	25782247	Lever, ASO
19	25782332	Lever, Detect
20	25782333	Swing Lever
21	25783195	Bushing
22	25754338	Hub Plate, Supply
23	25764549	Washer, 1.7ϕ
24	25764566	Washer
25	25771617	Spring
26	25772578	Compress Spring
27	25773442	Spring, Idler
28	25712367	Hub Plate, Take-up
29	25756179	High-speed Gear A
30	25782251	Lever, Take-up
31	25782252	Lever, Fast Forward
32	25719491	High-speed Gear Ass'y B
35	25713505	Idler Ass'y, Take-up
40	25782275	Lever, Record Lock
44	22701326	Screw, BID 3ϕ x 8mm, Tapping
45	25755335	Belt, Drive
46	25764398	Washer, 2.5ϕ
47	25717391	Flywheel Ass'y
51	25741545	Operation Plate, Rewind
52	25741787	Operation Plate, Play A
53	25741757	Operation Plate, Fast Forward
54	25741759	Operation Plate, Stop
56	25771955	Spring, Lock Slider
57	25771956	Spring, Operation Plate C
58	25773484	Spring, Operation Plate A
59	25773369	Spring, Operation Plate B
60	25773405	Spring, Click
63	25725340	Holder
65	22707301	Screw, BID 2.6ϕ x 8mm, Tapping
66	22707429	Screw, 2.6ϕ x 6.7mm, Special
68	25761238	Cushion, Motor
69	25791133	Motor Ass'y
70	22703280	Retaining Ring, 4ϕ
72	25761403	Cushion, Button
73	25779061	Spring, Button
74	25837415	Button, Pause
75	25837416	Button, Fase Forward
76	25837417	Button, Play
77	25837418	Button, Rewind
78	25837419	Button, Record
79	25837420	Button, Stop
80	25837421	Button, MQSS, Fast Forward
81	25837422	Button, MQSS, Rewind
82	22707602	Screw, BID 2ϕ x 10mm
84	22707322	Screw, DTBID 2ϕ x 10mm
85	25772585	Spring, Azimuth
86	25773365	Spring, Head Slider
87	25773366	Spring, Pressure Roller
88	25783224	Retainer, Head
89	25717392	Pressure Roller
92	22707350	Screw, DTBID 2.6ϕ x 5mm
93	22707300	Screw, BID 2.6ϕ x 6mm
95	25873196	Counter
96	25755387	Belt, Counter
107	22707475	Screw, BID 2.6ϕ x 4mm
115	25771450	Spring, Rewind Lever
116	25772321	Spring, Solenoid
117	25773476	Spring, MQSS Slider
119	25773477	Spring, MQSS Switch Lever
120	25783226	Bushing
CABINET PARTS		
301	25817854	Cabinet Front Ass'y
302	25817722	Cover Ass'y, Cassette
303	25838273	Cover, Cassette, Clear
304	25824247	Reflector, Cassette
305	25773474	Spring, Cassette Up
307	25837351	Knob, Tone
308	25837352	Knob, Volume
309	25837353	Knob, Tuning
310	25837354	Knob, Switch
311	25837363	Button-A, MQJS
312	25837364	Button-B, MQJS
313	25837365	Button-C, MQJS
314	25837366	Button-D, MQJS
315	25837367	Button-E, MQJS
316	25858490	Cover, Switch
317	25817855	Cabinet Back Ass'y
318	25817811	Cover Ass'y, Battery
319	25772575	Spring, Battery
320	25772570	Spring, Battery
321	25772571	Spring-A, Battery
323	25835412	Handle
324	25835413	Holder, Handle
325	25846369	Retainer, Handle
326	25835411	Washer, Handle
327	25846425	Retainer, Handle, Left
328	22707038	Screw, BID 3ϕ x 16mm, Tapping, Handle
329	25828458	Nameplate, Main
330	22741315	Pointer
331	25828461	Dial Plate
332	22742201	Dial Drum
333	25771548	Spring, Dial Drum
334	22707163	Screw, BID 3ϕ x 10mm
335	25833327	Ribbon, Battery
336	22707472	Screw, BID 4ϕ x 12mm, Tapping
337	22742218	Pulley Ass'y
338	22707200	Screw with Washer, TPAN 3ϕ x 10mm, BLK
339	22707151	Screw, BID 2.6ϕ x 5mm
341	22701326	Screw, BID 3ϕ x 8mm, Tapping
342	22702108	Nut, 3ϕ
343	22749212	Tuning Shaft Ass'y
344	25735166	Washer, Cassette Spring
345	25846429	Cover, MQJS
346	25846430	Holder, MQJS
347	22707169	Screw, BID 2.6ϕ x 10 mm, BLK
348	22705022	Plastic Rivet, 3ϕ x 5.5mm
349	22707473	Screw, BID 2.6ϕ x 6mm
350	22707303	Screw, BID 2.6ϕ x 10mm, Tapping
351	22707066	Screw, BID 3ϕ x 6mm
352	22701325	Screw, BID 3ϕ x 8mm
353	22707266	Screw, BID 3ϕ x 16mm, Tapping, RED
354	25846453	Retainer, Handle, Right
355	22707552	Screw, BID 3ϕ x 30mm, Tapping, RED
356	22701334	Screw, BID 3ϕ x 35mm, Tapping, BLK
357	22749263	Tuning Shaft Retainer Ass'y
358	25777001	Spring, Key
359	22707567	Screw, BID 3ϕ x 20 mm, Tapping, RED
TRANSISTORS, ICS & DIODES		
Q001, 002		Transistor, 2SC1923-O/Y
Q101		IC, TA7614AP
Q201		IC, TA7323P
Q303		IC, TA7229P
Q401, 402		Transistor, 2SC732-BL
Q102, 403, 404, 406, 407, 408, 409, 501, 604, 605		Transistor, 2SC1815-GR
Q301, 302		Transistor, 2SC1959-Y
Q405		IC, TA7328AP
Q601, 602, 606, 802		Transistor, 2SA1015-GR
Q603		IC, TC4035BP
Q701, 702		IC, TC4049BP
Q801		IC, TA7137P
Q803		Transistor, 2SC2655
Q901		Transistor, 2SC2120
D001, 002, 003, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 501, 601, 602, 603, 604, 605, 606, 612, 613, 614, 701, 702, 703, 712, 713, 714, 801, 802, 803, 804		Diode, 1S1555V
D004, 101		Diode, 1S2236
D607, 608, 609, 610, 611, 704, 705, 706, 707, 708, 709, 710, 711, 715, 716, 717, 718, 719		Diode, TLR208, Light Emitting
D805		Diode, 02Z9.1A
D901		Diode, 02Z6.8A
⚠ D902		Diode, 1B2C1
COILS & TRANSFORMERS		
L001	22294004	Coil, FM, RF, LH8405L
L002	22294361	Coil, FM, RF
L003	22294019	Coil, FM, RF, LH8404L

Symbol No.	Part No.	Description
L101	22291103	Coil, Choke, 1.5μH
L102	22282168	Coil, Antenna, SW2
L103	22282167	Coil, Antenna, SW1
L104	22285264	Coil, Oscillator, SW2
L105	22285263	Coil, Oscillator, SW1
L106	22245322	Coil, Oscillator, MW
L107	22265764	Transformer IF, IT16S5764, FM
L108	22264768	Transformer IF, IT15S4768, AM
L109	22264746	Transformer IF, IT15S4746, AM
L110	22267350	Transformer IF, IT16S7350, FM
L111	22242798	Coil, Antenna, MW
L501	22235180	Coil, Oscillator, Tape
⚠ L801	22147211	Solenoid
⚠ T901	22223764	Transformer, Power

ELECTRICAL PARTS

Symbol No.	Part No.	Description
W301, 302	22152314	Speaker, SP16S4S
W303, 304	22152302	Speaker, SP04T2B
A001	22124481	Telescopic Antenna
Z001	22153121	Filter, FM, RF
Z101	22153122	Filter, Ceramic
Z201, 202	22153078	Filter, MPX
J1, 2, 3, 4	22163789	Jack, US4P-M, LINE IN/OUT
J5	22163668	Jack with Switch, 3.5ø, Ext. Mic., L
J6, 10, 11	22163666	Jack, 3.5ø, Ext. SP L/R & Ext. Mic., R
J7, 8	22154222	Microphone Unit, EM80-S
⚠ J12	22167849	AC Socket, 3P
S101 to 106	22195351	Switch, Band Select, FM-AM
S201 to 206, 301 to 305	22195161	Switch, Band Select, MW-SW1-SW2, Function, Tape-Radio-Aux
S402 to 403	22195072	Switch, Mode, Mono-ST-Wide
S501 to 509	22195468	Switch, Record/Playback
S601 to 602	22195522	Switch, Editer
S611 to 615	22195145	Switch, Key, MQJS
S701	22195603	Switch, MQJS
S801	22195555	Switch, Power

CAPACITORS

D = ±0.5pF, J = ±5%, K = ±10%, M = ±20%, Z = $^{+80}_{-20}\%$

Symbol No.	Part No.	Description
C001, 002, 003, 004, 007, 008, 009, 012	22308422	Variable

Symbol No.	Part No.	Description
C005, 006, 010, 011	22309149	Trimmer
C013	22360133	Ceramic, 18pF (CH), J, 50V
C014	22342223	Ceramic, 0.022mfd, Z, 50V
C015	22342223	Ceramic, 0.022mfd, Z, 50V
C016	22361309	Ceramic, 3pF, D, 50V
C017	22360134	Ceramic, 22pF (CH), J, 50V
C018	22349331	Ceramic, 330pF, K, 50V
C019	22360310	Ceramic, 10pF (CH), D, 50V
C020	22360311	Ceramic, 12pF (CH), D, 50V
C021	22342223	Ceramic, 0.022mfd, Z, 50V
C022	22342223	Ceramic, 0.022mfd, Z, 50V
C023	22361309	Ceramic, 3pF, D, 50V
C024	22488478	Electrolytic, 0.47mfd, 50V
C025	22342223	Ceramic, 0.022mfd, Z, 50V
C026	22483470	Electrolytic, 47mfd, 10V
C101	22362330	Ceramic, 33pF, K, 50V
C103	22361809	Ceramic, 8pF, D, 50V
C105	22342223	Ceramic, 0.022mfd, Z, 50V
C106	22349472	Ceramic, 4700pF, K, 50V
C107	22349391	Ceramic, 390pF, K, 50V
C108	22321059	Polypropylene, 1500pF, K, 50V
C110	22361309	Ceramic, 3pF, D, 50V
C111	22361120	Ceramic, 12pF, D, 50V
C112	22360345	Barrier Layer, 0.022mfd, M, 25V
C113	22483101	Electrolytic, 100mfd, 10V
C114	22342223	Ceramic, 0.022mfd, Z, 50V
C115	22342473	Ceramic, 0.047mfd, Z, 50V
C116	22342223	Ceramic, 0.022mfd, Z, 50V
C117	22362101	Ceramic, 100pF, K, 50V
C118	22342223	Ceramic, 0.022mfd, Z, 50V
C119	22373473	Mylar, 0.047mfd, M, 50V
C120	22483101	Electrolytic, 100mfd, 10V
C121	22362101	Ceramic, 100pF, K, 50V
C122	22485100	Electrolytic, 10mfd, 16V
C123	22483470	Electrolytic, 47mfd, 10V
C124	22342473	Ceramic, 0.047mfd, Z, 50V
C125	22349391	Ceramic, 390pF, K, 50V
C127	22443221	Electrolytic, 220mfd, 10V
C128	22485100	Electrolytic, 10mfd, 16V
C129	22342223	Ceramic, 0.022mfd, Z, 50V
C130	22360345	Barrier Layer, 0.022mfd, M, 25V
C131	22361509	Ceramic, 5pF, D, 50V
C132	22362101	Ceramic, 100pF, K, 50V
C133	22362221	Ceramic, 220pF, K, 50V
C201	22440271	Electrolytic, 0.47mfd, 50V
C202	22440271	Electrolytic, 0.47mfd, 50V
C203	22488228	Electrolytic, 0.22mfd, 50V
C204	22483221	Electrolytic, 220mfd, 10V
C205	22371102	Mylar, 1000pF, J, 50V

Symbol No.	Part No.	Description
C206	22488339	Electrolytic, 3.3mfd, 50V
C301	22448108	Electrolytic, 0.1mfd, 50V
C302	22448108	Electrolytic, 0.1mfd, 50V
C303	22488338	Electrolytic, 0.33mfd, 50V
C304	22488338	Electrolytic, 0.33mfd, 50V
C305	22349472	Ceramic, 4700pF, K, 50V
C306	22349472	Ceramic, 4700pF, K, 50V
C308	22360331	Barrier Layer, 0.047mfd, M, 25V
C309	22488339	Electrolytic, 3.3mfd, 50V
C310	22488339	Electrolytic, 3.3mfd, 50V
C311	22485220	Electrolytic, 22mfd, 16V
C312	22485220	Electrolytic, 22mfd, 16V
C313	22483221	Electrolytic, 220mfd, 10V
C314	22485101	Electrolytic, 100mfd, 16V
C315	22349391	Ceramic, 390pF, K, 50V
C316	22349391	Ceramic, 390pF, K, 50V
C317	22342223	Ceramic, 0.022mfd, Z, 50V
C318	22342223	Ceramic, 0.022mfd, Z, 50V
C319	22362101	Ceramic, 100pF, K, 50V
C320	22362101	Ceramic, 100pF, K, 50V
C321	22483101	Electrolytic, 100mfd, 10V
C322	22483101	Electrolytic, 100mfd, 10V
C323	22342473	Ceramic, 0.047mfd, Z, 50V
C324	22342473	Ceramic, 0.047mfd, Z, 50V
C325	22342223	Ceramic, 0.022mfd, Z, 50V
C326	22342223	Ceramic, 0.022mfd, Z, 50V
C327	22373104	Mylar, 0.1mfd, M, 50V
C328	22373104	Mylar, 0.1mfd, M, 50V
C329	22483102	Electrolytic, 1000mfd, 10V
C330	22483102	Electrolytic, 1000mfd, 10V
C331	22483331	Electrolytic, 330mfd, 10V
C332	22360333	Barrier Layer, 0.1mfd, M, 25V
C333	22373682	Mylar, 6800pF, M, 50V
C334	22373682	Mylar, 6800pF, M, 50V
C335	22360332	Barrier Layer, 0.068mfd, M, 25V
C336	22360332	Barrier Layer, 0.068mfd, M, 25V
C337	22475479	Electrolytic, 4.7mfd, 16V
C338	22475479	Electrolytic, 4.7mfd, 16V
C401	22440271	Electrolytic, 0.47mfd, 50V
C402	22440271	Electrolytic, 0.47mfd, 50V
C403	22483470	Electrolytic, 47mfd, 10V
C404	22483101	Electrolytic, 100mfd, 10V
C405	22440271	Electrolytic, 0.47mfd, 50V
C406	22440271	Electrolytic, 0.47mfd, 50V
C407	22349222	Ceramic, 2200pF, K, 50V
C408	22349222	Ceramic, 2200pF, K, 50V
C409	22349391	Ceramic, 390pF, K, 50V
C410	22349391	Ceramic, 390pF, K, 50V
C411	22440271	Electrolytic, 0.47mfd, 50V
C412	22440271	Electrolytic, 0.47mfd, 50V

Symbol No.	Part No.	Description
C413	22349332	Ceramic, 3300pF, K, 50V
C414	22349332	Ceramic, 3300pF, K, 50V
C415	22349472	Ceramic, 4700pF, K, 50V
C416	22349472	Ceramic, 4700pF, K, 50V
C417	22349102	Ceramic, 1000pF, K, 50V
C418	22349102	Ceramic, 1000pF, K, 50V
C419	22362180	Ceramic, 18pF, K, 50V
C420	22362180	Ceramic, 18pF, K, 50V
C421	22485100	Electrolytic, 10mfd, 16V
C422	22485100	Electrolytic, 10mfd, 16V
C423	22349472	Ceramic, 4700pF, K, 50V
C424	22349472	Ceramic, 4700pF, K, 50V
C425	22349472	Ceramic, 4700pF, K, 50V
C426	22349472	Ceramic, 4700pF, K, 50V
C427	22488478	Electrolytic, 0.47mfd, 50V
C428	22488478	Electrolytic, 0.47mfd, 50V
C429	22483470	Electrolytic, 47mfd, 10V
C430	22485100	Electrolytic, 10mfd, 16V
C439	22488339	Electrolytic, 3.3mfd, 50V
C440	22360331	Barrier Layer, 0.047mfd, M, 25V
C441	22483331	Electrolytic, 330mfd, 10V
C442	22349472	Ceramic, 4700pF, K, 50V
C443	22440271	Electrolytic, 0.47mfd, 50V
C444	22349103	Ceramic, 0.01mfd, K, 50V
C445	22488479	Electrolytic, 4m7mfd, 50V
C446	22488339	Electrolytic, 3.3mfd, 50V
C447	22360331	Barrier Layer, 0.047mfd, M, 25V
C448	22349472	Ceramic, 4700pF, K, 50V
C501	22371153	Mylar, 0.015mfd, J, 50V
C502	22372123	Mylar, 0.012mfd, K, 50V
C503	22483101	Electrolytic, 100mfd, 10V
C504	22382272	Polystyrene, 2700pF, K, 50V
C602	22373222	Ceramic, 2200pF
C603	22488109	Electrolytic, 1mfd, 50V
C604	22349222	Ceramic, 2200pF, K, 50V
C605	22488339	Electrolytic, 3.3mfd, 50V
C606	22342223	Ceramic, 0.022mfd, Z, 50V
C701	22349102	Ceramic, 1000pF, K, 50V
C702	22349102	Ceramic, 1000pF, K, 50V
C703	22349102	Ceramic, 1000pF, K, 50V
C704	22349102	Ceramic, 1000pF, K, 50V
C705	22349102	Ceramic, 1000pF, K, 50V
C706	22483221	Electrolytic, 220mfd, 10V
C707	22488478	Electrolytic, 0.47mfd, 50V
C708	22488478	Electrolytic, 0.47mfd, 50V
C709	22483470	Electrolytic, 47mfd, 10V
C710	22349102	Ceramic, 1000pF, K, 50V
C711	22349102	Ceramic, 1000pF, K, 50V
C712	22349102	Ceramic, 1000pF, K, 50V
C713	22349102	Ceramic, 1000pF, K, 50V
C714	22349102	Ceramic, 1000pF, K, 50V

Symbol No.	Part No.	Description
C715	22488478	Electrolytic, 0.47mfd, 50V
C716	22488478	Electrolytic, 0.47mfd, 50V
C717	22483470	Electrolytic, 47mfd, 10V
C801	22349102	Ceramic, 1000pF, K, 50V
C802	22488339	Electrolytic, 3.3mfd, 50V
C803	22342103	Ceramic, 0.01mfd, Z, 50V
C804	22485220	Electrolytic, 22mfd, 16V
C901	22342223	Ceramic, 0.022mfd, Z, 50V
C902	22483331	Electrolytic, 330mfd, 10V
C903	22342223	Ceramic, 0.022mfd, Z, 50V
C904	22485101	Electrolytic, 100mfd, 16V
⚠ C905	22485222	Electrolytic, 2200mfd, 16V
C906	22342223	Ceramic, 0.022mfd, Z, 50V
C907	22342223	Ceramic, 0.022mfd, Z, 50V
C910	22342473	Ceramic, 0.047mfd, Z, 50V

RESISTORS

1. **Resistors are Carbon film ¼W, ±5%, unless otherwise noted.**
2. **PRC is short for the printed resistor circuit. If replacement of the resistor in PRC is required, please use the substitutional fixed carbon film resistor of ¼W, ±5% according to the following list**
   K = 1000, M = 1000000.

Symbol No.	Part No.	Description
R001	22545102	1K ohm (PRC)
R002	22545471	470 ohm (PRC)
R003	22545333	33K ohm (PRC)
R004	22545823	82K ohm (PRC)
R005	22545471	470 ohm (PRC)
R006	22555180	18 ohm
R007	22555689	6.8 ohm
R008	22555390	39 ohm
R009	22545102	1K ohm (PRC)
R010	22545333	33K ohm (PRC)
R011	22545823	82K ohm (PRC)
R012	22545471	470 ohm (PRC)
R013	22545101	100 ohm (PRC)
R014	22545104	100K ohm (PRC)
R101	22545682	6.8K ohm (PRC)
R102	22545682	6.8K ohm (PRC)
R103	22545682	6.8K ohm (PRC)
R104	22555470	47 ohm
R105	22545331	330 ohm (PRC)
R106	22555124	120K ohm
R107	22545101	100 ohm (PRC)
R108	22545182	1.8K ohm (PRC)
R109	22545182	1.8K ohm (PRC)
*R110	22555279	2.7 ohm, TA7614AP-W
	22555479	4.7 ohm, TA7614AP-Y
R111	22545151	150 ohm (PRC)
R112	22545151	150 ohm (PRC)
R113	22545151	150 ohm (PRC)

Symbol No.	Part No.	Description
R114	22545332	3.3K ohm (PRC)
R115	22545223	22K ohm (PRC)
R116	22545820	82 ohm
R117	22545103	10K ohm (PRC)
R118	22545274	270K ohm (PRC)
R119	22545333	33K ohm (PRC)
R120	22545821	820 ohm (PRC)
R121	22545223	22K ohm (PRC)
R122	22545682	6.8K ohm (PRC)
R123	22622417	Semi-fixed Variable, 10K-B, Fine Tuning
R124	22555473	47K ohm
R201	22545102	1K ohm (PRC)
R202	22545562	5.6K ohm (PRC)
R203	22658498	Semi-fixed Variable, 10K ohm, Free Run
R204	22545104	100K ohm (PRC)
*R205	22555279	2.7 ohm, TA7614AP-W
	22555479	4.7 ohm, TA7614AP-Y
R206	22545152	1.5K ohm (PRC)
R207	22545152	1.5K ohm (PRC)
R208	22545223	22K ohm (PRC)
R209	22545223	22K ohm (PRC)
R210	22545151	150 ohm (PRC)
R211	22555102	1K ohm
R212	22545561	560 ohm (PRC)
R213	22545561	560 ohm (PRC)
R214	22545152	1.5K ohm (PRC)
R215	22555560	56 ohm
R301	22545682	6.8K ohm (PRC)
R302	22545682	6.8K ohm (PRC)
R303	22545391	390 ohm (PRC)
R304	22545391	390 ohm (PRC)
R305, 306	22651517	Variable, ϕ16, 50K-A, Tone
R307, 308	22651516	Variable, ϕ16, 50K-B, Volume
R309	22545222	2.2K ohm (PRC)
R310	22545222	2.2K ohm (PRC)
R311	22545181	180 ohm (PRC)
R312	22545181	180 ohm (PRC)
R313	22545563	56K ohm (PRC)
R314	22545563	56K ohm (PRC)
R315	22545123	12K ohm (PRC)
R316	22545123	12K ohm (PRC)
R317	22545393	39K ohm (PRC)
R318	22545393	39K ohm (PRC)
R319	22545121	120 ohm (PRC)
R320	22545121	120 ohm (PRC)
R321	22625420	Variable, 50K-B, Balance
R322	22545274	270K ohm (PRC)
R323	22545472	4.7K ohm (PRC)
R324	22545102	1K ohm (PRC)
R325	22545102	1K ohm (PRC)
R326, 327	22651517	Variable, ϕ16, 50K-A, Tone

Symbol No.	Part No.	Description
R401	22545103	10K ohm (PRC)
R402	22545103	10K ohm (PRC)
R403	22545473	47K ohm (PRC)
R404	22545473	47K ohm (PRC)
R405	22545271	270 ohm (PRC)
R406	22545271	270 ohm (PRC)
R407	22545102	1K ohm (PRC)
R408	22545102	1K ohm (PRC)
R409	22545222	2.2K ohm (PRC)
R410	22545222	2.2K ohm (PRC)
R411	22545472	4.7K ohm (PRC)
R412	22545472	4.7K ohm (PRC)
R414	22545332	3.3K ohm (PRC)
R415	22545182	1.8K ohm (PRC)
R416	22545223	22K ohm (PRC)
R417	22545223	22K ohm (PRC)
R418	22555225	2.2M ohm
R419	22555225	2.2M ohm
R420	22555151	150 ohm
R421	22555151	150 ohm
R422	22555103	10K ohm
R423	22555103	10K ohm
R424	22545152	15K ohm (PRC)
R425	22545152	15K ohm (PRC)
R426	22545473	47K ohm (PRC)
R427	22545473	47K ohm (PRC)
R428	22545334	330K ohm
R429	22545334	330K ohm
R430	22545124	120K ohm
R431	22545124	120K ohm
R432	22545391	390 ohm (PRC)
R433	22545391	390 ohm (PRC)
R434	22545392	3.9K ohm (PRC)
R435	22545392	3.9K ohm (PRC)
R436	22545223	22K ohm (PRC)
R437	22545223	22K ohm (PRC)
R438	22545681	680 ohm (PRC)
R439	22545681	680 ohm (PRC)
R440	22545103	10K ohm (PRC)
R441	22545103	10K ohm (PRC)
R442	22545182	1.8K ohm (PRC)
R443	22545182	1.8K ohm (PRC)
R444	22545332	3.3K ohm (PRC)
R445	22545332	3.3K ohm (PRC)
R446	22545223	2.2K ohm (PRC)
R447	22545223	2.2K ohm (PRC)
R448	22545473	47K ohm (PRC)
R449	22545473	47K ohm (PRC)
R450	22555225	2.2M ohm
R451	22545103	10K ohm (PRC)
R452	22545103	10K ohm (PRC)
R453	22545102	1K ohm (PRC)
R454	22545102	1K ohm (PRC)
R455	22545103	10K ohm (PRC)
R456	22545332	3.3K ohm (PRC)
R457	22545102	1K ohm (PRC)
R458	22545103	10K ohm (PRC)
R459	22545102	1K ohm (PRC)
R460	22545103	10K ohm (PRC)
R461	22545331	330 ohm (PRC)
R462	22545331	330 ohm (PRC)
R463	22545103	10K ohm (PRC)
R464	22545103	10K ohm (PRC)
R465	22545102	1K ohm (PRC)
R466	22545152	1.5K ohm (PRC)
R467	22545333	33K ohm (PRC)
R468	22545102	1K ohm (PRC)
R469	22555105	1M ohm
R470	22545333	33K ohm (PRC)
R471	22545333	33K ohm (PRC)
R472	22555330	33 ohm
R501	22555820	82 ohm
R502	22555273	27K ohm
R503	22555152	1.5K ohm
R504	22555220	22 ohm
R601	22545123	12K ohm (PRC)
R602	22545473	47K ohm (PRC)
R603	22545104	100K ohm (PRC)
R604	22545104	100K ohm (PRC)
R605	22545104	100K ohm (PRC)
R606	22545104	100K ohm (PRC)
R607	22545123	12K ohm (PRC)
R608	22545123	12K ohm (PRC)
R609	22545123	12K ohm (PRC)
R610	22545123	12K ohm (PRC)
R611	22545123	12K ohm (PRC)
R612	22545123	12K ohm (PRC)
R614	22545104	100K ohm (PRC)
R615	22545473	47K ohm (PRC)
R616	22545562	5.6K ohm (PRC)
R617	22545821	820 ohm (PRC)
R618	22555273	27K ohm
R619	22545182	1.8K ohm (PRC)
R620	22545273	27K ohm (PRC)
R621	22545392	3.9K ohm (PRC)
R622	22545393	39K ohm (PRC)
R623	22545822	8.2K ohm (PRC)
R624	22545123	12K ohm (PRC)
R625	22545472	4.7K ohm (PRC)
R626	22545392	3.9K ohm (PRC)
R627	22555561	560 ohm
R628	22545223	22K ohm (PRC)
R629	22545392	3.9K ohm (PRC)
R630	22545274	470K ohm (PRC)
R701	22545152	1.5K ohm (PRC)
R702	22545152	1.5K ohm (PRC)

Symbol No.	Part No.	Description
R703	22545152	1.5K ohm (PRC)
R704	22545104	100K ohm (PRC)
R705	22545223	22K ohm (PRC)
R706	22545103	10K ohm (PRC)
R707	22545103	10K ohm (PRC)
R708	22545273	27K ohm (PRC)
R709	22545393	39K ohm (PRC)
R710	22545152	1.5K ohm (PRC)
R711	22545152	1.5K ohm (PRC)
R712	22545124	120K ohm (PRC)
R713	22545101	100 ohm (PRC)
R714	22545154	150K ohm (PRC)
R715	22545472	4.7K ohm (PRC)
R717	22545154	150K ohm (PRC)
R718	22545101	100 ohm (PRC)
R719	22545124	120K ohm (PRC)
R720	22545472	4.7K ohm (PRC)
R721	22545393	39K ohm (PRC)
R722	22545223	22K ohm (PRC)
R723	22545104	100K ohm (PRC)
R724	22545273	27K ohm (PRC)
R725	22545152	1.5K ohm (PRC)
R726	22545152	1.5K ohm (PRC)
R727	22545152	1.5K ohm (PRC)
R728	22545152	1.5K ohm (PRC)
R729	22545103	10K ohm (PRC)
R730	22545103	10K ohm (PRC)
R731	22545152	1.5K ohm (PRC)
R732	22545152	15K ohm (PRC)
R801	22545473	47K ohm (PRC)
R802	22545473	47K ohm (PRC)
R803	22545223	22K ohm (PRC)
R804	22545223	22K ohm (PRC)
R805	22545223	22K ohm (PRC)
R806	22545102	1K ohm (PRC)
R807	22545223	22K ohm (PRC)
R808	22545151	150 ohm
R809	22545273	27K ohm (PRC)
R810	22545273	27K ohm (PRC)
⚠ R901	22555569	5.6 ohm
R902	22555330	33 ohm
R903	22555221	220 ohm
ACCESSORIES		
	22176532	AC Power Supply Cord, C2SET
	22902544	Owner's Manual
	22105345	Cassette Tape, C07, Demonstration
	22906179	Cord, Pop

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